

III. REMARKS

In the Office Action, objection was made to the use of language in claim 22 as set forth in Point 2 of the Action. The claim is amended by adopting the suggestion of the examiner to overcome the ground of objection.

Claims 1-22 were rejected under 35 U.S.C. 112, first paragraph, because an amendatory passage inserted in to the claims, namely, "carry feedback concerning an ongoing communication on a dedicated communication channel", is not described sufficiently in the specification. Claims 1-9, 13, 16 and 19-22 were rejected under 35 U.S.C. 103 as being unpatentable over Blanc (US 6661777) in view of Malkamaki (US 5577024) for reasons set forth in the Action.

Claims 10-12, 14-15, and 17-18 were said to have allowable subject matter, in the present Action as well as in previous Actions.

With respect to the rejections under 35 U.S.C. 112 and 103, various ones of the claims are amended and the following argument is presented to distinguish the claimed subject matter from the teachings of the cited art, considered individually and in combination, thereby to overcome the rejections and to show the presence of allowable subject matter in the claims.

In order to overcome the rejection under 35 U.S.C. 112, each of the independent claims 1, 16 and 19-22 is amended to delete the foregoing insertion which was said to be inadequately disclosed in the present specification, thereby to overcome the rejection under 35 U.S.C. 112, first paragraph. It is noted that the specification discusses the transmission of control information in the uplink direction, also referred to as the reverse direction, on page 1 at lines 6-9 and lines 20-32, page 2 at lines 19-29, page 3 at lines 30-33, page 4 at lines 16-21 and lines 27-29, and page 6 at lines 17-21.

In order to overcome the rejections under 35 U.S.C. 103, each of these independent claims 1, 16 and 19-22 is further amended by reciting that the messages describe estimated phase differences between signals received from plural transmission antennas. This limitation is supported by the specification as found on page 2 at lines 23 and 26 discussing phase difference, page 4 at lines 16-21 defining a non-dedicated fast signaling channel, and page 6 at lines 17-18 that teaches the conveying of messages that describe the estimated phase difference at a receiver. This amendment introduces a limitation that is not disclosed in the cited art and, therefore, is believed to distinguish the claimed subject matter from the teachings of the cited art, so as to overcome the rejections under 35 U.S.C. 103, and to provide allowable subject matter in the claims.

With respect to the claims 10-12 which depend from claim 1 and are said to have allowable subject matter, a new claim 23 is presented by combination of subject matter of claim 1 with subject matter of the training sequence disclosed in claims 10-12, and supported by present Fig. 4 and the specification on page 7 at lines 20-34.

The following argument, presented in the previous response, should be considered in view of the present amendment. In Malkamaki (Col. 1 at lines 29-32, Col. 2 at lines 2-7 45-60, and Col. 6 at lines 20-26), there is recognition of the use of an acknowledgment channel to signal the presence of a successful transmission or the failure to attain a successful transmission. Malkamaki observes that such transmissions of an acknowledgment signal may be infrequent and that, therefore, there is an unnecessary wastage of channel capacity. Malkamaki provides a way by which numerous users of a communication system can employ the idle time of the acknowledgment channel without having collisions among their respective signal, this being accomplished by mutually distinguishable subchannels, as by making the respective signals orthogonal to each other.

Thus, the basic thrust of the Malkamaki teaching is to use spare time found in a dedicated channel (which happens to be dedicated to the transmission of acknowledgment signals) for other purposes.

In contrast, the present specification discusses a situation such as a GSM communication system (Page 1 at lines 26-29) wherein a data carrying channel is used to convey signaling information. This is advantageous in a situation employing two antennas to give fast feedback (page 2 at lines 19-27). This can be accomplished (page 3, beginning at line 30, and page 4 at lines 16-21 and 27-29) by defining a generally non-dedicated piece of transmission capacity to serve as a fast signaling channel.

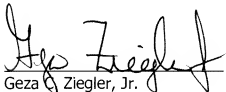
Thus, a feature in the teaching of the present specification is to employ a non-dedicated channel for a specific purpose, such as providing for a signaling in the reverse direction, as from a mobile station to a base station.

Upon comparing the two teachings of Malkamaki and the present specification, the two teachings appear to be directed in opposite directions, namely, Malkamaki tries to provide a non-signaling use for a dedicated channel, and the present specification tries to provide a signaling use for a non-dedicated channel. It is argued that, therefore, there can be no motivation to combine Malkamaki with Blanc, and that Malkamaki teaches away from the presently claimed subject matter.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for the RCE fee as well as the extra independent claim (\$1240) as well as any other fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,



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30 April 2007
Date

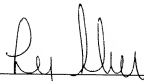
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Lisa Shimizu

Person Making Deposit